

Multiple Thoracic Spinal Lesions Causing Spinal Cord Compression Secondary to Multiple Myeloma in a Patient with Synchronously Diagnosed Renal Cell Carcinoma: Value of Lesional Biopsy!

Sir,

A 68-year-old woman with history of hypertension and hyperlipidemia presented with progressively worsening upper back pain for 4 weeks. She denied any history of fall or trauma. Her physical examination revealed full strength and normal sensation but was notable for increased patellar reflex and positive bilateral Babinski's signs. Computed tomography (CT) of the thoracic spine revealed multiple lytic lesions throughout the thoracic spine including compression fracture at T4 and destruction of the right T7 vertebral body and pedicle [Figure 1]. Magnetic resonance imaging of the thoracic spine again demonstrated the T4 pathological compression fracture and a large, enhancing T7 lesion causing severe spinal canal stenosis with spinal cord compression and obliteration of the right T7–T8 neural foramen. Systemic work-up with CT of the chest, abdomen, and pelvis revealed a solitary 4.7 cm × 4.6 cm × 5.0 cm heterogeneous mass in the upper pole of the left kidney [Figure 1]. The patient subsequently underwent biopsy of the renal mass which demonstrated the presence of renal cell carcinoma (RCC). Based on the results of biopsy from the extraspinal lesion, the spinal lesions were considered to be metastasis from renal primary and she underwent thoracic transpedicular decompression and instrumented fusion. However, the final histopathology from the spinal tumor revealed the presence of multiple myeloma. The patient received standard external beam radiotherapy to the spine and was doing well at her 3-month follow-up.

CT-guided biopsy of a spinal lesion is often recommended as the initial step involvement in management of isolated spinal neoplasms as the treatment often depends on the pathology of the lesion and may range from radiation alone versus *en bloc* resection.^[1] Nevertheless, in patients with known systemic malignancy and synchronously diagnosed spinal lesions, especially if multiple, a diagnosis of spinal metastasis from the systemic cancer is often entertained and treated accordingly. If the interval between development of spinal lesion and initial diagnosis of systemic tumor is long, it is recommended to biopsy the spinal lesion because of higher possibility of it being a different pathology and considering the fact that CT-guided percutaneous biopsy is minimally invasive, safe, and very effective in providing a pathological diagnosis.^[2] The recent understanding of tumor biology and increasing role of stereotactic radiosurgery has altered the treatment paradigm for spinal metastasis allowing treatment of a number of spinal tumors with radiation alone which were once considered radio-



Figure 1: Axial (a) and sagittal (b) reconstruction of computed tomography of the thoracic spine demonstrating destruction of the right T7 vertebral body and pedicle (a) and a T4 compression fracture along with multiple lytic lesions in the thoracic spine (b). Axial T2-weighted magnetic resonance imaging (c) revealing a large, T7 lesion causing severe spinal canal stenosis with spinal cord compression and obliteration of the right T7–T8 neural foramen; sagittal T2-weighted magnetic resonance imaging (d) demonstrating the T4 pathological compression fracture and resultant kyphotic deformity; computed tomography of the chest, abdomen, and pelvis (e) demonstrating a solitary 4.7 cm × 4.6 cm × 5.0 cm heterogeneous mass in the upper pole of the left kidney (white arrow)

resistant.^[3] Henceforth, the importance of obtaining a tissue diagnosis cannot be overemphasized. The patient described here highlights this as there can be simultaneous occurrence of dual pathologies and attributing the spinal lesion as a metastasis based on the presence of a systemic tumor can lead to incorrect diagnosis and treatment. Preoperative diagnosis of multiple myeloma (MM) in the present case could have led to alteration of treatment approach in the case described as MM is exquisitely sensitive to radiation and avoidance of a major spinal surgery with its associated complications.^[3] Even if surgery is performed in patients with radiosensitive tumors, the overall aggressiveness of it is different as compared to radio-resistant pathologies.^[3] In this case, the patient was found to have a new left renal mass along with multiple lytic spinal lesions. Biopsy of the renal mass revealed RCC and the spinal tumors were also diagnosed as RCC metastasis, and obtaining a tissue diagnosis of the vertebral lesions was considered redundant. The patient underwent corpectomy and resection of both the spinal metastases and multilevel instrumentation and stabilization as the lesions were not amenable to radiation treatment due to the presence of high-grade spinal cord compression and radio-resistant pathology which finally was proven to be MM on histopathological

examination.^[3] This case highlights the importance of tissue diagnosis of the spinal lesions even in patients with coexistent synchronously diagnosed systemic cancer.

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Conflicts of interest

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